Date: Wed, 16 Jun 93 16:00:11 PDT
From: Packet-Radio Mailing List and Newsgroup <packet-radio@ucsd.edu>
Errors-To: Packet-Radio-Errors@UCSD.Edu
Reply-To: Packet-Radio@UCSD.Edu
Precedence: Bulk
Subject: Packet-Radio Digest V93 #171
To: packet-radio

Packet-Radio Digest Wed, 16 Jun 93 Volume 93 : Issue 171

Today's Topics:
(none)
Available: NOS Telnet Terminal Type Negotiation
Digital microwave project
FAQ ??
Field Day Packet Rules?
ham packet
Ian Wade's NOSintro (2 msgs)
INFORMATIONS NEEDED
MiniSport Laptop Hacker - Vol 6
QPSK modulator/demodulator chips?
tcp help in NY (Long Island)
using a Sound Blaster board as a TNC (2 msgs)

Send Replies or notes for publication to: <Packet-Radio@UCSD.Edu>
Send subscription requests to: <Packet-Radio-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Packet-Radio Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/packet-radio".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 16 Jun 93 20:37:07 GMT
From: news-mail-gateway@ucsd.edu
Subject: (none)
To: packet-radio@ucsd.edu

Date: Wed, 16 Jun 93 01:05:16 GMT
From: csus.edu!netcom.com!netcomsv!orchard.la.locus.com!prodnet.la.locus.com!

lando.la.locus.com!dana@decwrl.dec.com
Subject: Available: NOS Telnet Terminal Type Negotiation
To: packet-radio@ucsd.edu

I've uploaded code to ucsd.edu:/hamradio/packet/tcpip/incoming and wg7j.ece.orst.edu:/incoming to allow NOS Telnet clients to send a teminal type to the telnet server. tnterm.txt is a short description of the update, and tnterm.zip is a zipfile of the changed files, limited to telnet.h and telnet.c.

Enjoy!

P.S. On wg7j.ece.orst.edu, be aware that the tnterm.gud is the good zipfile if present, otherwise use tnterm.zip.

```
--
 * Dana H. Myers KK6JQ       | Views expressed here are  *
 * (310) 337-5136       | mine and do not necessarily    *
 * dana@locus.com  DoD #466      | reflect those of my employer
     *
 * This Extra supports the abolition of the 13 and 20 WPM tests *
```

Date: 16 Jun 93 04:03:13 GMT
From: ogicse!netnews.nwnet.net!spiff.seattleu.edu!quick!ole!ssc!markz@network.UCSD.EDU
Subject: Digital microwave project
To: packet-radio@ucsd.edu

Keith Ledig (ree88132@zach.fit.edu) wrote:
: I am about to embark on a project that envolves the use of microwaves
: to transfer digital data.

: 2. What frequencies can be used for this microwave link? HAM?
:   Are there allocated frequencies for such experimentation and
:   do they require a license?

If you operate under the provisions of the regulations used for unlicensed operation (Part 15) there are some allocations that can run resonable power. Up to 1 watt ERP. On the frequencies 902-928, 2400-2483.5 and 5725-5850 MHz. These are the regulations used by the new Wireless LANs. (Part 15.247) Spread Spectrum operation is required.

: 4. Can one antenna be used to transmit AND receive (related to question
:   3 and 5).

If you alternate between the two, all you have to worry about is not frying the receiver. (As opposed to receiving the signal at the same time as transmitting.)

: 7. Where can I find out more info on this stuff?

Code of Federal Regulations Title 47 (Telecommunications) Parts 0 to 19. (A book available from a US Government Bookstore, or in the government section of any large library.)

Code of Federal Regulations Title 47 (Telecommunications) Parts 80 to End. (For the Private Operational-fixed microwave Service (Part 94) and the Amateur Radio Service regulations, Part 97).

The ARRL UHF/Microwave Experimenters Handbook.
American Radio Relay League, 1990

The ARRL Spread Spectrum Sourcebook.
American Radio Relay League, 1991

Microwave Handbook, Volumes 1 and 2
Radio Society of Great Britian, 1989 and 1991

Mark Zenier markz@ssc.wa.com markz@ssc.com

Date: Thu, 10 Jun 93 21:12:54 GMT
From: pipex!uknet!keele!nott-cs!unicorn!eeyimkn@uunet.uu.net
Subject: FAQ ??
To: packet-radio@ucsd.edu

In article <1993Jun10.121044.28612@sol.ctr.columbia.edu> sjg@phlim.ph.kcl.ac.uk (Simon Gornall) writes:

>I'm looking to get into packet basically for internet access. I've

Internet access and packet from the UK? Hahahaha...best laugh I've had in ages.

>What I want to know is, is there a packet<->internet gateway placed
>reasonably close to London ? And if not, how viable is it to run my

No there isn't. I dunno what you are expecting from packet, but full-service Internet access certainly don't exist. If you can run a full Internet node down a crowded 1200baud radio link, I'll be _very_ impressed. Also, I presume you know you need an amateur radio licence for this?
Sorry to put such a dampener on things, but the packet network is a long way from being able to handle Internet traffic, and there's also a thing called the

third-party rule which would mean you couldn't handle any traffic which wasn't to/from licensed amateurs.. although I suppose my Linux box is connected to the local TCP/IP net so it is in theory an Internet host.. just not connected to the rest of the net, that's all :-)
If you want to know more, drop me an email..

>machine as an internet site as if it were a unix box ? I expect this
>is in the FAQ :-)

Hmm.. we don't actually have an FAQ, do we?? Just wondering..

Cheers, Mike

```
--
+--------------------------   O   Mike Knell, University of Nottingham, UK -+
|       Nevertheless..       -/ \- Internet: eeyimkn@unicorn.nott.ac.uk      |
|     the Turtle Moves!      -\_/- AX25: g7gpa@gb7bad.#23.gbr.eu             |
+--------------------------   |   AMPRnet: mpk@hobbes.g7gpa.ampr.org -------+
```

Date: 16 Jun 93 18:44:32 GMT
From: mentor.cc.purdue.edu!jbradsha@purdue.edu
Subject: Field Day Packet Rules?
To: packet-radio@ucsd.edu

I wish I'd saved it but I didn't. There was a post regarding the rules for field day on worm holes etc. Could someone report them? I'd really appreciate it.

73's

\--
Jonathan Bradshaw | Email Jonathan.Bradshaw@nd.edu | Prodigy XMSN02B | Ham N9OXE
WNDU-AM/FM/TV South Bend, IN | Disclaimer "My opinions are not my employers"
"If any girl rejects you, don't you doubt it's part of the .plan"-Deborah Gibson

----

Date: 16 Jun 93 11:26:00 GMT
From: ogicse!uwm.edu!math.ohio-state.edu!caen!uvaarpa!pplace!
pat.wilson@network.UCSD.EDU
Subject: ham packet
To: packet-radio@ucsd.edu

Hi all, N0RDQ is my call and just testing. Please ignore this ker-chunk. (smile)

Date: 16 Jun 93 08:30:33 GMT
From: news-mail-gateway@ucsd.edu
Subject: Ian Wade's NOSintro
To: packet-radio@ucsd.edu

Dear Packet Radio Group,

Does anyone know where in the United States I might be able to purchase a copy of Ian Wade's "NOSintro: An Introduction to the KA9Q Network Operating System"? I am very interested in getting a copy of it as soon as possible. Any leads (addresses + telephone numbers) would be greatly appreciated. Also, if anyone knows of other introductions to ka9q (aside from what is already at the UCSD.EDU archive) that they would recommend, I would greatly appreciate it. Thank you very much.

Ned Bade
CIIFAD

```
+---------------------------------------+
|  Ned Bade                             |
|  eb15@cornell.edu                     |
|  jqej@crux2.cit.cornell.edu           |
|  Cornell International Insitute for  |
|   Food, Agriculture and Development  |
|  Box 14, Kennedy Hall                 |
|  Cornell University                   |
|  Ithaca, NY 14853 USA                 |
|  Tel:  (607) 255-3035                 |
|  FAX:  (607) 255-1005                 |
+---------------------------------------+
```

Date: Wed, 16 Jun 1993 19:46:13 GMT
From: swrinde!gatech!howland.reston.ans.net!agate!news.ucdavis.edu!
othello.ucdavis.edu!ez006683@network.UCSD.EDU
Subject: Ian Wade's NOSintro
To: packet-radio@ucsd.edu

Ned Bade, Ned Bade (eb15@postoffice.mail.cornell.EDU) wrote:

: telephone numbers) would be greatly appreciated. Also, if anyone
: knows of other introductions to ka9q (aside from what is already

: at the UCSD.EDU archive) that they would recommend, I would
: greatly appreciate it. Thank you very much.

I'm not sure where to get it or if it is on UCSD but Gary Ford has a really good Nos intro packet that is available electronically. I have it somewhere, e-mail if you can't find it anywhere else. It was sufficient to get me running, and I was on ax.25 for less than 2 months at the time.

Dan
--

```
*---------------------------------------------------------------------*
* Daniel D. Todd      Packet: KC6UUD@WA6RDH.#nocal.ca.usa             *
*                   Internet: DDTODD@ucdavis.edu                      *
*                 Snail Mail: 1750 Hanover #102                       *
*                             Davis CA 95616                          *
*---------------------------------------------------------------------*
*       I do not speak for the University of California....           *
*       and it sure as hell doesn't speak for me!!                    *
*---------------------------------------------------------------------*
```

Date: 15 Jun 1993 13:36:52 GMT
From: ghost.dsi.unimi.it!univ-lyon1.fr!taloa.unice.fr!frmop11.cnusc.fr!ciril.fr!watt!sbausson@tcgould.tn.cornell.edu
Subject: INFORMATIONS NEEDED
To: packet-radio@ucsd.edu

Hello,

I am not an amateur radio, but I would like to know if the radio amateurs can
access
internet via the waves.

If it's possible, can you mail me inforamtion about this ....

Thanks a lot

--

```
     _/_/_/_/      _/                  _/_/   _/_/_/
   _/             _/                 _/     _/
  _/           _/_/_/             _/_/_/ _/_/_/_/
  _/             _/                 _/      _/
```

```
   _/_/_/_     _/     _/_/_/      _/     _/
         _/   _/    _/     _/    _/     _/
         _/  _/    _/_/_/_/_/   _/     _/  Stephane BAUSSON
        _/  _/     _/          _/     _/   ENSEM Nancy (France)
_/_/_/_/     _/_/   _/_/_/_/  _/     _/    sbausson@ensem.u-nancy.fr
----------------------------------------------------------------------
```

This message is written in 100% renewable electrons

Date: 16 Jun 93 22:18:51 GMT
From: ogicse!hp-cv!sdd.hp.com!cs.utexas.edu!uwm.edu!csd4.csd.uwm.edu!
anthony@network.UCSD.EDU
Subject: MiniSport Laptop Hacker - Vol 6
To: packet-radio@ucsd.edu

In article <o63T5B2w165w@opus-ovh.spk.wa.us> bmork@opus-ovh.spk.wa.us (Brian) writes:

>I've received a number of requests to provide back issues of ML Hacker. I
>don't want to inappropriately burden the packet networks, so I've hesitated
>sending back issues to everyone that asks. I could see this getting out of
>hand when somebody sees Volume 23 and asks me to send the preceeding 22!

Volumes 1-8 of the MiniSport Laptop Hacker are now available via anonymous ftp on the Internet from csd4.csd.uwm.edu: /pub/Portables/minisport.laptop.hacker or via gopher on the same machine under /UWM Information/Computing Services Division/ Csd4 Public FTP Archive/Portables/minisport.laptop.hacker UWM is the University of Wisconsin--Milwaukee.

Archived news articles on the MiniSport and other machines and topics are in the same directory.
--
<-:(= Anthony Stieber anthony@csd4.csd.uwm.edu   uwm!uwmcsd4!anthony

---

Date: 16 Jun 1993 20:46:19 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
darwin.sura.net!bogus.sura.net!udel!sbcs.sunysb.edu!rick@network.UCSD.EDU
Subject: QPSK modulator/demodulator chips?
To: packet-radio@ucsd.edu

Aside from Stanford Telecom, does anyone know of a source for digital QPSK modulator/demodulator chips? I am especially interested in low cost chips sets that function in the 512 kbit/sec range. Thanks - Rick Spanbauer, State U of NY/Stony Brook

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Date: 15 Jun 93 21:47:42 GMT
From: ogicse!uwm.edu!cs.utexas.edu!not-for-mail@network.UCSD.EDU
Subject: tcp help in NY (Long Island)
To: packet-radio@ucsd.edu

Looking for someone experienced in TCP/IP on Long Island.

--
Daniel Drucker N2SXX | xyzzy@gnu.ai.mit.edu [forwards to]
Finger first address for much info. | daniel%mertwig@uunet.uu.net
        Ask me about my internet culture research project.

Date: 16 Jun 93 20:31:36 GMT
From: ogicse!hp-cv!sdd.hp.com!col.hp.com!fc.hp.com!mckee@network.UCSD.EDU
Subject: using a Sound Blaster board as a TNC
To: packet-radio@ucsd.edu

Johnathan Vail (vail@tegra.com) wrote:

: And back to the original thread: by the time you have a sufficient
: computer and software and another $100 for a board why would anyone
: ever want to dedicate this to packet when you can do it easier and
: cheaper with a TNC?

I did the SSTV work because I didn't know anything about Digital Signal Processing and wanted to, and for me having a real project is the best way to learn. I admit up front that it is cheaper, easier and more reliable to use purchased hardware if what you really want to do is use it.

73,

Bret

Date: 16 Jun 93 20:25:21 GMT
From: ogicse!uwm.edu!cs.utexas.edu!sdd.hp.com!col.hp.com!fc.hp.com!
mckee@network.UCSD.EDU
Subject: using a Sound Blaster board as a TNC
To: packet-radio@ucsd.edu

Jeff Liebermann (jeffl@comix.UUCP) wrote:
: In article <C8Gs1s.AMA@fc.hp.com> mckee@fc.hp.com (Bret McKee) writes:
:
: >As I mentioned in a previous post, I have looked into it. I have had a
: >working sound card SSTV system for more than a year, but lack of time

: If you can do SSTV with a SoundBlaster, would WEFAX (HF FM fax or
: VHF AM fax) be feasable? The 23Khz maximum sample rate of the
: 8 bit SB100 (bottom of the line) is probably marginal for
: VHF AM. However, the 16 bit SbPro version will go to 44Khz
: and should work.

It should be very feasable. I even have the format information for some WEFAX, although it has not been added into my software yet.

I think that you are overestimating the requirements for the sampling rate, although I don't know the exact details of the formats. 23Khz will get signals up to 11.5 Khz, which is certainly better than the audio passband on any of my radios :-). And if more is needed, the much cheaper SB pro will sample to 44 Khz. For FM signals, the difference between 8 and 16 bits will not matter.

For SSTV, which uses tones up to around 2400 HZ, I have had perfectly good luck using 8Khz sampling.

: Yet another project (groan...).

Exactly. I got the information hoping to add WEFAX in an evening, although that evening has not yet come.

73,

Bret

Date: Wed, 16 Jun 1993 09:47:48 GMT
From: agate!howland.reston.ans.net!gatech!kd4nc!ke4zv!gary@ames.arpa
To: packet-radio@ucsd.edu

References <C8nAqG.4px@athena.cs.uga.edu>, <1993Jun15.141003.22243@ke4zv.uucp>, <1vl7lpINN79h@network.ucsd.edu>
Reply-To : gary@ke4zv.UUCP (Gary Coffman)
Subject : Re: Digital microwave project

In article <1vl7lpINN79h@network.ucsd.edu> brian@nothing.ucsd.edu (Brian Kantor) writes:
>gary@ke4zv.UUCP (Gary Coffman) writes:

>>>>Strictly speaking, all such transmissions are prohibited, even the
>>>>midi sequences. The rules don't specify the format, only the content.
>
>Indeed, one could not, under that opinion, legally send images of sheet
>music, or speak sequences of notes over ham radio.
>
>Luckily, however, the rule of law is tempered to justice by reason.
>   - Brian

Well you'd hope so Brian. However, we used to play music over the
ID slide during the warm up period for our transmitter at sign on.
We were cited. The commission said we weren't licensed as a radio
station and couldn't play music without accompanying *moving*
video. So I wouldn't be so sure that they use good judgement
in interpreting the rules.

Gary
--
```
Gary Coffman KE4ZV          |    You make it,     | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems |    we break it.     | uunet!rsiatl!ke4zv!gary
534 Shannon Way             |    Guaranteed!      | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244     |                     |
```

Date: 16 JUN 93 09:45:38
From: pa.dec.com!uvo.dec.com!janix.unt.dec.com!ryn.mro4.dec.com!
cimfie.enet.dec.com!taber@decwrl.dec.com
To: packet-radio@ucsd.edu

References <1993Jun14.144241.17691@ke4zv.uucp>, <C8nAqG.4px@athena.cs.uga.edu>,
<1993Jun15.141003.22243@ke4zv.uucp>
Subject : Re: Digital microwave project

In article <1993Jun15.141003.22243@ke4zv.uucp>, gary@ke4zv.uucp (Gary Coffman)
writes...
>>Actually, the FCC's intentions are clear, and are not quite what you
>>said. Transmission of descriptions of music is OK so long as the music
>>cannot be directly demodulated as such with ordinary radio equipment
>>-- that is, you can transmit all the MIDI sequences you want, but don't
>>transmit music as audio on FM, AM, or SSB.
>
>And exactly *where* in the rules does it say that? Part 97.113(d)
>flatly prohibits the transmission of music. It does not specify a
>modulation encoding. This part deals strictly with content, and
>not the method used to convey that content.

Good analysis IFF part 97 was the only word on the subject. But it's not. I believe the ARRL has already asked for guidance on the regulation and have been told that "music" in that regulation means, as any rational person would expect, music as you hear it in the broadcast band. It does not mean other methods of representing music and does not mean music picked up in the background when public service operators are working a parade or music incidentally picked up from your car radio when you're talking on the repeater.

It is common, and in fact required, that regulatory bodies give interpretation of their regulations those interpretations aren't as binding as the regulations themselves, but they are binding to a lesser extent and can be depended upon for day-to-day operation.

So give the armchair lawyer act a break.

>>>==>PStJTT

Date: Wed, 16 Jun 1993 18:02:19 GMT
From: ulowell!tegra!vail@uunet.uu.net
To: packet-radio@ucsd.edu

References <19930611.052806.kf5mg@vnet.ibm.com>, <C8Gs1s.AMA@fc.hp.com>, <621@comix.UUCP>
Subject : Re: using a Sound Blaster board as a TNC

In article <621@comix.UUCP> jeffl@comix.UUCP (Jeff Liebermann) writes:

> In article <C8Gs1s.AMA@fc.hp.com> mckee@fc.hp.com (Bret McKee) writes:
> >Jack Snodgrass (kf5mg@iinus1.ibm.com) wrote:
> >:   Does anyone know what issuse of what magazine had the blurb about
> >: doing SSTV using a SB board? Has anyone contacted the program's author
> >: to discuss doing something similar with packet instead of SSTV. Thanks.
> >
> >As I mentioned in a previous post, I have looked into it. I have had a
> >working sound card SSTV system for more than a year, but lack of time
>
> If you can do SSTV with a SoundBlaster, would WEFAX (HF FM fax or
> VHF AM fax) be feasable? The 23Khz maximum sample rate of the
> 8 bit SB100 (bottom of the line) is probably marginal for
> VHF AM. However, the 16 bit SbPro version will go to 44Khz
> and should work.

Someone (a group affiliated with DRIG?) was doing just this. The problems they were working around was 32k DMA sizes and disk buffering of the image. Another hurdle is getting the proper frequency for sampling since the available clocks on the SM are not a multiple of 2400.

Still, they were getting great images out of it but it sounded like there was still a lot of problems in making is plug and play.

And back to the original thread: by the time you have a sufficient computer and software and another $100 for a board why would anyone ever want to dedicate this to packet when you can do it easier and cheaper with a TNC?

jv

```
 -----
|     | Johnathan Vail     vail@tegra.com     (508) 663-7435
|Tegra| jv@n1dxg.ampr.org    N1DXG@448.625-(WorldNet)
 -----  MEMBER: League for Programming Freedom (league@prep.ai.mit.edu)
```

Date: 16 Jun 1993 17:29:51 GMT
From: nothing.ucsd.edu!brian@network.UCSD.EDU
To: packet-radio@ucsd.edu

References <1993Jun15.141003.22243@ke4zv.uucp>, <1vl7lpINN79h@network.ucsd.edu>, <1993Jun16.094748.26829@ke4zv.uucp>
Subject : Re: Digital microwave project

gary@ke4zv.UUCP (Gary Coffman) writes:
>brian@nothing.ucsd.edu (Brian Kantor) writes:
>>Luckily, however, the rule of law is tempered to justice by reason.
>
>Well you'd hope so Brian. However, we used to play music over the
>ID slide during the warm up period for our transmitter at sign on.
>We were cited. The commission said we weren't licensed as a radio
>station and couldn't play music without accompanying *moving*
>video. So I wouldn't be so sure that they use good judgement
>in interpreting the rules.

I suspect you didn't challenge the citation - for most commercial operations, it isn't worth it for small things like that.

But I know that I'd definitely take any such citation up the ladder of review and hearing if I thought the FCC was being arbitrary or capricious, as is my right and my duty.

I do know of a few people who have indeed done just that - instead of just sending in the fine (excuse me, "monetary forfeiture"), and won.

In any case where the alleged "offense" is based on an unreasonable interpretation of the FCC regs, I'd think it would very much be worthwhile to consider challenging it.

This isn't directly relevant, Gary, but was the citing FCC officer the same one who is rumoured to have cited his wife for failing to identify, and was responsible for the infamous "900 number packet message" debacle? I ask because it's about the right part of the country....
     - Brian

Date: 16 Jun 93 18:23:40 GMT
From: ogicse!emory!athena!aisun3.ai.uga.edu!mcovingt@network.UCSD.EDU
To: packet-radio@ucsd.edu

References <1vl7lpINN79h@network.ucsd.edu>, <1993Jun16.094748.26829@ke4zv.uucp>,
<1vnlafINNabc@network.ucsd.edu>)
Subject : Re: Digital microwave project

>gary@ke4zv.UUCP (Gary Coffman) writes:
>>Well you'd hope so Brian. However, we used to play music over the
>>ID slide during the warm up period for our transmitter at sign on.
>>We were cited. The commission said we weren't licensed as a radio
>>station and couldn't play music without accompanying *moving*
>>video. So I wouldn't be so sure that they use good judgement
>>in interpreting the rules.

There is an ongoing muddle arising from the fact that transmission of music (as audio) is forbidden, but transmission of video programs with incidental music is permitted.

If ultimate intent is to prohibit "broadcasting of entertainment to the general public" then the FCC needs to address the fact that some of these video programs are no less "entertaining" than music would be.

I would prefer seeing them drop the ban on music in bands where fast-scan ATV is permitted (and where there is little need to conserve spectrum).

```
--
:-  Michael A. Covington, Associate Research Scientist        :    *****
:-  Artificial Intelligence Programs      mcovingt@ai.uga.edu :  *********
:-  The University of Georgia              phone 706 542-0358 :   *  *  *
```

:- Athens, Georgia 30602-7415 U.S.A.   amateur radio N4TMI : ** *** ** <><

End of Packet-Radio Digest V93 #171
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